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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,096	06/29/2000	Menachem Levanoni	YOR9-2000-0431US1	8138

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IBM Corporation
Intellectual Property Law Dept
P O Box 218
Yorktown Heights, NY 10598

EXAMINER

BACHNER, REBECCA M

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 04/28/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,096

Applicant(s)

LEVANONI ET AL.

Examiner

Rebecca M Bachner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Detailed Action

This is a first office action on the merit. Claims 1-10 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-5, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by "Company Makes Science Out of Shopping Trends" Boston Business Journal. 3 September 1998 about Technology Strategy Inc. (www.grossprofit.com).

As per claim 1, Technology Strategy Inc. discloses a method suitable for projecting demand, the method comprising the steps of:

(i) identifying a first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) specifying a second set of merchandise which is to be used as a referent for soliciting information relative which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(iii) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 5-9, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);

(iv) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributes of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(v) combining the step (iii) demand profile and the step (iv) model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise).

As per claim 4, Technology Strategy Inc. discloses a method according to claim 1, comprising the step of selecting the pre-determined attribute of said first set of merchandise from the group consisting of item, size, and location (see page 1, paragraph 6, the item and size of the item is disclosed, also see page 2, paragraph 3, the region, or location, is also disclosed).

As per claim 5, Technology Strategy Inc. discloses a method according to claim 1, comprising the step of selecting a pre-determined attribute of said first set of merchandise from the group consisting of item, size, color, and location (see page 1,

paragraph 6, the item and size of the item is disclosed; also see page 2, paragraph 3, the region, or location, is also disclosed)

As per claim 7, Technology Strategy Inc. discloses a method of claim 1, wherein the step (iv) comprises generating a demand model based on modeling demand as a function of major variables selected from a group consisting of price, promotions, inventory level, and seasonal effects (see page 1, paragraph 6, price is incorporated into the model; also see page 2, paragraph 3, inventory level is incorporated into the model).

As per claim 9, Technology Strategy Inc. discloses a computer implemented method comprising the steps of:

(i) identifying a first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) specifying a second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(iii) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 5-9, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);

(iv) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributed of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(v) combining the step (iii) demand profile and the step (iv) demand model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Technology Strategy Inc.

As per claim 2, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly disclose wherein said first and second set of merchandise are disparate. However, it is old and well known in the art for the merchandise in a model to be disparate. Therefore, it would be obvious to one of

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ordinary skill in the art at the time of the invention to have disparate merchandise as it would allow TSI to pick two separate and distinct retail items to predict future demand. By having two disparate items, TSI will be able to find trends throughout the retail store rather than in a specific type of clothing or brand.

As per claim 3, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly wherein said first and second set of merchandise overlap. However, it is old and well known in the art to teach merchandise in a model to overlap. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to have the merchandise overlap as it would allow TSI to forecast future retail inventory sales and purchases based on the way similar retail items have sold thus reducing the retail owners risk of profit loss from the first set of retail items.

As per claim 6, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly does not explicitly disclose wherein step (iii) comprises clustering the second set of merchandise by utilizing an algorithm which partitions this set into non-overlapping clusters with similar size profiles. However, it is old and well known in the art to disclose an algorithm with non-overlapping clusters with similar size profiles. Therefore, it would have been obvious to one of ordinary skill in the art to disclose an algorithm with non-overlapping clusters with similar size profiles as one would want to compare data of the same size to accurately forecast future demand.

As per claim 8, Technology Strategy Inc. discloses a method according to claim 1, wherein step (v) comprises combining the demand profile and the demand model into a single encompassing model by apportioning the model-based demand forecast (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise). Technology Strategy Inc. does not explicitly disclose having the appropriate size distribution using a size demand profile. However, it is old and well known in the art to disclose have a reasonable size distribution for the demand profile to ensure accurate results. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have an appropriate size distribution in the demand profile as it increases the reliability of the data used to forecast demand and provides a more accurate and reliable forecast.

As per claim 10, Technology Strategy Inc. discloses a computer suitable for projecting demand, the computer comprising:

- (i) an identified first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

- (ii) an identified second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

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(a) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 5-9, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);

(b) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributed of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(c) combining the demand profile and the demand model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise); and

a demand forecast by the pre-determined attribute (see page 2, paragraphs 1-4, a demand is forecasted by the pre-determined attribute).

Technology Strategy Inc. does not explicitly disclose a database or a CPU receiving inputs from the database, or an output display. However, it is old and well known in the art that a computer is used to solve difficult and complex algorithm. A computer inherently contains a CPU and an output display. The use of a database is also old and well known in the art to store information and data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a database, a CPU, and an output display as it allows a user to more easily compute complex computations.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leung et al. (U.S. P.N. 6,397,166) discloses a system for clustering data and creating a model.

Aykin (U.S. P.N. 6,516,301) discloses a system that forecasts customer orders by analyzing and profiling past orders.

"Gymboree Selects TSI to Design and Implement Inventory optimization and Pricing Solution – Agreement Marks Significant Expansion of Successful Partnership". Press Release. Cambridge Ma. 13 January 1999 discloses a decision support tool and models.

"Gymboree Uses Models to Maintain the Right Inventory Levels and Determine the Timing and Percentages of Markdowns." Stores Magazine. November 1998 discloses mathematical modeling based on historical sales and statistical analysis.

"Looking Back to Fashion's Future: Firm helps Retailers Develop Merchandising Plans." The Boston Globe. 7 October 1998 discloses risk assessment and creating mathematical models.

"Best Buy Refined Inventory Process." Executive Technology. August 1999 discloses mathematical modeling.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Rebecca Bachner** whose telephone number is 703-305-1872. The examiner can normally be reached on Monday - Friday from 8:30am to 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tariq Hafiz** can be reached on **(703) 305-9643**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **(703) 308-1113**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

or faxed to:

(703) 305-7687 Official communications; including After Final
communications labeled "Box AF"

(703) 746-7306 Informal/Draft communications, labeled "PROPOSED" or "
DRAFT"

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7th floor receptionist.

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March 26, 2003

Susanna Diaz
Susanna Diaz
Patent Examiner
Art Unit 3623